

California Regional Water Quality Control Board
Santa Ana Region

Cleanup and Abatement Order No. R8-2003-0013
for

County of San Bernardino, Solid Waste Management Division
Mid-Valley Sanitary Landfill
City of Rialto, San Bernardino County

The California Regional Water Quality Control Board, Santa Ana Region
(hereinafter Regional Board), finds that:

1. The County of San Bernardino (hereinafter County) currently owns property in Sections 28 and 29, Township 1 North, Range 5 West, San Bernardino Base and Meridian, in the County of San Bernardino, State of California.
2. The County operates the Mid-Valley Sanitary Landfill (MVSL) on the property noted above. The MVSL property consists of 302 acres, of which about 142 acres are currently used for waste disposal activities. A portion of the property is used to stockpile soil for landfill cover. Another portion of the property is leased to a sand and gravel operation. Ultimately, waste disposal activities will be expanded to include most of the property.
3. The MVSL is a municipal solid waste disposal facility that has been operated by the County since 1958. Land filling of waste has been conducted in phases, with each phase consisting of waste being applied on a different portion of the property. Early phases of the landfill (Units 1 and 2) were constructed on native soil without a clay or synthetic liner, or a leachate collection system. The most recent phase of the landfill (Unit 3) began operation in 2002. This phase has, and all future phases (Units 4 and 5) will have, a liner and a leachate collection system.
4. Perchlorate, in the form of perchlorate salts, such as ammonium perchlorate, was used historically, and is still used, by several tenants of the properties to the north, northeast, and southeast of the landfill. It is possible that the landfill may have accepted perchlorate waste from these neighboring tenants.
5. The County purchased what is now the easterly portion of the MVSL property in 1993. This property contained storage bunkers that were known to have housed explosives, chemicals, propellant, oxidizers, and fireworks. These bunkers were constructed, and were initially used, by the military in the mid-1940s. The bunkers were subsequently used by

- aerospace, hazardous waste and fireworks companies. Perchlorate was handled and stored in bunkers in this area. The County demolished the bunkers in 1993. A portion of this area is currently leased to a sand and gravel operation.
6. Perchlorate salts are highly soluble and dissociate in water to form perchlorate ions. There are currently no state or federal drinking water standards for perchlorate. However, in 1997, the California Department of Health Services (DHS) established a drinking water Action Level (AL) for perchlorate of 18 parts per billion (ppb), and in 2002, DHS lowered the AL to four ppb. An AL is a temporary safe drinking water level that is based on limited studies that have been performed. Perchlorate is currently present in the Rialto, Colton, Chino I and Chino II Groundwater Subbasins. The West San Bernardino County Water District, the Fontana Water Company, and the Cities of Rialto and Colton have limited or ceased use of 22 municipal water supply wells that exceed the AL for perchlorate.
 7. Municipal water supply wells in the Rialto, Colton, Chino I and Chino II Groundwater Subbasins have been, or are likely to be, affected by the perchlorate pollution in these basins. Regional Board staff is currently attempting to identify all parties that may have discharged perchlorate in these basins.
 8. Perchlorate was initially detected in low concentrations (less than 5 ppb) in two of the MVSL monitoring wells in 1997. In 2001, the concentration of perchlorate in one of these wells increased significantly, to 250 ppb. As a result, the County increased its monitoring for perchlorate in existing monitoring wells and assessed possible perchlorate sources on its property, which included collecting and analyzing soil samples, and process water samples from its tenant's operation, on the eastern portion of the County's property. The County found that the source of the perchlorate currently found in groundwater immediately adjacent to, and down gradient of, the County's property may be from the eastern area of its property that the County purchased in 1993.
 9. Beginning in August 2002, the County installed seven monitoring wells on, and in the vicinity of, the eastern portion of their property. The analytical results of groundwater samples obtained from these monitoring wells showed that perchlorate was not present in the monitoring wells located upgradient of the eastern portion of the County's property, but was present in concentrations as high as 1,100 ppb in the monitoring wells downgradient of this area.

10. On November 15, 2002, the County submitted a work plan to further define the lateral and vertical extent of perchlorate. Board staff is currently reviewing the work plan, and coordinating and evaluating comments on the work plan that are being submitted by other interested parties.
11. Based on the results of the soil and groundwater investigations conducted by the County, it is evident that perchlorate is being discharged to groundwater from property that is currently owned by the County.
12. The beneficial uses of the Rialto, Colton, Chino I and Chino II Groundwater Subbasins include:
 - A. Municipal and domestic supply,
 - B. Agricultural supply,
 - C. Industrial service supply, and
 - D. Industrial process supply.
13. The County has caused or permitted, is causing or permitting, or threatens to cause or permit waste, i.e., perchlorate, to be discharged to waters of the state, specifically the Rialto, Colton, Chino I and Chino II Groundwater Subbasins, and has created, or threatens to create a condition of pollution or nuisance.
14. California Water Code Section 13304 allows the Regional Board to recover reasonable expenses from responsible parties for overseeing cleanup and abatement activities. It is the Regional Board's intent to recover such costs for regulatory oversight work conducted in accordance with this order.
15. This enforcement action is being taken by a regulatory agency to enforce a water quality law. Such action is exempt from the provisions of the California Environmental Quality Act (Public Resources Code, Section 21000, et seq.) in accordance with Section 15321, Article 19, Division 3, Title 14, California Code of Regulations.
16. Additional investigation is necessary to define the vertical and lateral extent of the perchlorate that is discharging, has been discharged, or threatens to be discharged, from the County's property.
17. It is appropriate to order the County to clean up and abate the effects of the discharge of perchlorate from property that the County currently owns and controls.
18. A similar order may be issued at a later date to former tenants of the County's property if Regional Board staff obtains additional information

indicating that a specific tenant(s) is a source of the perchlorate that is present in the groundwater.

IT IS HEREBY ORDERED THAT, pursuant to Section 13304, Article 1, Chapter 5, Division 7, of the California Water Code, the County of San Bernardino shall:

1. Implement the work plan submitted on November 15, 2002, as approved by the Executive Officer, in order to further define the lateral and vertical extent of the perchlorate that is discharging, has been discharged, or threatens to be discharged, from the County's property noted in Finding 1, above.
2. Prepare and implement additional work plans that the Executive Officer deems necessary to sufficiently characterize the lateral and vertical extent of perchlorate that is discharging, has been discharged, or threatens to be discharged, from the County's property. The work plans shall be implemented in accordance with time schedules approved by the Executive Officer.
3. After the Executive Officer determines that the lateral and vertical extent of perchlorate that is discharging, has been discharged, or threatens to be discharged from the County's property has been sufficiently defined, submit a detailed remedial action plan to cleanup the perchlorate that is discharging, has been discharged, or threatens to be discharged, from the County's property. The remedial action plan shall be submitted within 60 days of the Executive Officer's notification to the County that the definition of the extent of perchlorate is sufficiently complete. The remedial action plan and schedule shall be subject to approval by the Executive Officer.
4. Implement the remedial action plan in 3., above, as approved by the Executive Officer.

I, Gerard J. Thibeault, Executive Officer, do hereby certify that the foregoing is a full, true and correct copy of an order adopted by the California Regional Water Quality Control Board, Santa Ana Region, on January 17, 2003.

Gerard J. Thibeault
Executive Officer